

### REMARKS

This Amendment is in response to the Office Action dated March 29, 2007, in which claims 1-14 were rejected. Applicants respectfully request reconsideration and allowance of all pending claims in view of the above-amendments and the following remarks.

#### I. CLAIM OBJECTIONS

Claims 1-14 are amended to replace “the said” with “said”, as requested in the Office Action.

Applicant therefore respectfully requests that the claim objections be withdrawn.

#### II. CLAIM REJECTIONS

Claims 1, 4-5, 9, 11 and 12-14 are rejected under §103(a) as being allegedly unpatentable over Chen (U.S. Publ. No. 2005/0059401) in view of Haapoja et al. (U.S. Publ. No. 2002/0127982)

Claims 2 and 3 are rejected as being unpatentable over Chen and in view of Haapoja et al. in view of Alard (U.S. Patent No. 6,584,068).

Claims 6 and 7 are rejected as being unpatentable over Chen and Haapoja et al. in view of Jou (U.S. Patent No. 6,925,067).

Claim 8 is rejected as being unpatentable over Chen and Haapoja et al. in view of Bohnke (U.S. Patent No. 6,567,383).

Claim 10 is rejected as being unpatentable over Chen and Haapoja et al. in view of Dolgonos et al. (US 2002/0147978).

##### A. **Chen et al.**

With respect to Chen et al., the Office Action acknowledges that Chen et al. fails to disclose a communication channel using a multi-carrier being assigned solely to a downlink.

However, the Office Action fails to acknowledge the elements of claim 1 that are also not disclosed by Chen et al. or provide an explanation as to why Applicant’s arguments on these elements are not persuasive.

##### 1. Office Action Mischaracterizes Chen et al.

Further, the Office Action mischaracterizes Chen et al. by stating on page 3 that,

“Chen teaches . . . a communication channel using the said multiple carrier modulation being assigned to the communication between the said transmission device and the said receiving terminal . . .”

According to the language of claim 1, “said transmission device” and “said receiving terminal” are the same transmission device and receiving terminal in which the communication is set up using the first communication mode based on a single carrier modulation.

In contrast, Chen et al. relates to wireless telecommunications and handoff from one base station to another base station, considering their capabilities.

More precisely, Chen et al. disclose a method for a wireless telecommunications infrastructure to facilitate a remote station handoff from a set of single carrier-compliant base stations to at least one multi-carrier compliant base station, while a remote station is in the coverage area of both types of base stations (paragraph 28).

For instance, a handoff between a single carrier base station BS1 and a multi-carrier base station BS3 is described in figure 6, for a remote station X. According to this example, BS3, which is a multi-carrier handoff candidate, receives a handoff message from BS1, instructing it to cease single carrier communications with BS1, and to begin multi-carrier communications for the communication between BS3 and the remote station.

According to Chen, there is a changeover in the transmission protocol, i.e. the remote station changes from a single carrier transmission protocol to a multi-carrier transmission protocol, only when the terminal (remote station) communicates with a new base station.

For example, according to figures 5, 6 and 7, the terminal communicates according to a single carrier transmission protocol with base stations BS1D and BS1E, and then according to a multi-carrier transmission protocol with base station BS3B.

The present disclosure does not try to solve the problem of handoffs between base stations. Rather, for communications between a terminal (“receiving terminal” according to claim 1) and the same base station (“transmission device”), use a first communication based on a single carrier modulation for setting up a communication, and then a second communication mode

using a multiple carrier modulation for high speed data transmission, the first and second communication modes being implemented successively and alternately.

Moreover, Chen et al. do not disclose that the changeover from the first communication mode to the second communication mode is implemented according to at least one signaling information transmitted by the transmission device to the receiving terminal through the first communication mode. According to Chen et al., a special message, called handoff message needs to be sent from a single carrier base station to a multi-carrier base station (paragraph 82).

As a consequence, Chen discloses the changeover from a single carrier transmission protocol to a multi-carrier transmission protocol when a terminal is moving and communicates with different base stations.

However, Chen et al. do not describe, nor suggest, the implementation of the two communication modes successively and alternately, the first mode using a single carrier modulation and the second mode using a multi-carrier modulation, for communications between a terminal and the same base station.

In other words, it doesn't describe establishing a communication with the first communication mode, and then use the second communication mode to exchange data at high-speed between the base station and the reception terminal, using only a downlink channel.

These distinct differences have been ignored in the present Office Action.

#### **B. Haapoja et al.**

Haapoja et al. relates to RF receivers capable of receiving multiple carrier or single carrier signal.

According to Haapoja et al., multiple carrier transmission is implemented in downlink, when the base station has multi-carrier transmission capability (paragraph 34, last line, and paragraph 51).

Like Chen et al., Haapoja et al. is not relevant toward the invention, as it does not disclose the idea of using a first communication mode based on a single carrier modulation for the establishment of a communication, and a second communication mode based on multi

carriers modulation for high speed data transmission, where the first and second communication modes are implemented successively and alternately.

Furthermore, according to paragraph [0067] of Haapoja et al., multiple carrier transmission can also be implemented in uplink, when the mobile station has multi-carrier transmission capability.

**C. Chen et al. in view of Haapoja et al.**

According to Chen, there is a changeover in the transmission protocol, i.e. the remote station changes from a single carrier transmission protocol to a multi-carrier transmission protocol, only when the terminal (remote station) communicates with a new base station.

Moreover, Chen fails to teach a communication channel using the multiple carriers solely assigned to downlink.

In addition, neither Chen, nor Haapoja, discloses that the changeover from the first communication mode to the second communication mode is implemented according to at least one signaling information transmitted by the transmission device to the receiving terminal through the first communication mode.

More precisely, according to Chen, a special message, called handoff message need to be sent from a single carrier base station to a multi-carrier base station (paragraph 82).

Finally, according to Haapoja, the communication channel using the multiple carriers is not solely assigned to downlink: according to paragraph 67, multiple carrier transmission can also be implemented in uplink, when the mobile station has multi-carrier transmission capability.

The Office Action therefore fails to present a prima facie case as to why such a structure or method would be obvious in view of Chen et al. and Haapoja et al. when numerous elements of Applicant's claims are clearly lacking.

**III. CONCLUSION**

Chen et al. and Haapoja et al. therefore do not anticipate the elements of claim 1 or its rejected dependent claims. For similar reasons, Chen et al. also does not anticipate the elements of independent claims 12-14.

Moreover, claims 1-14 are new and non-obvious in further view of Alard, Jou, Bohnke, or Dolgonos.

Applicants therefore respectfully request that the rejections of claims 1-14 be withdrawn.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: /David D. Brush/  
David D. Brush, Reg. No. 34,557  
Suite 1400  
900 Second Avenue South  
Minneapolis, Minnesota 55402-3319  
Phone: (612) 334-3222 Fax: (612) 334-3312

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